Ref. 24
001

URS

URS OPERATING SERVICES, INC.
START 3 - REGION 8

MEMORANDUM

TO: **File**

FROM: **Jeremiah Ervin** JE

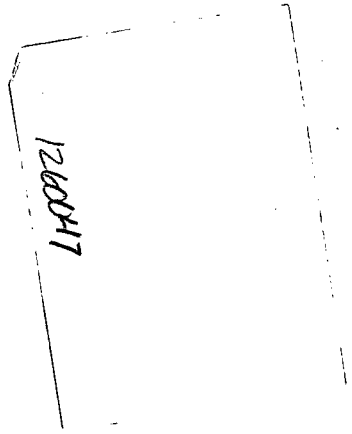
DATE: **December 15, 2011**

SUBJECT: **Area of Mine Tailings for Gold King Mine Determined by Geographical Information System (GIS) Spatial Data**

An area of mine tailings, 142,097 square feet, at the Gold King Mine was calculated using collected global positioning system (GPS) data points and linear features, collected August 15, 2011, that represented a partial outline of visible mine tailings at the Gold King Mine. These GPS data features were imported into ESRI ARC Info Work Station 10.0. A polygon shape file was created by connecting GPS collected north and south linear features of the Gold King Mine tailings pile. All polygon nodes were snapped to GPS points that represented the most distal locations within the data array. The area of the polygon shape file was calculated using the 'Calculate Geometry' function in the polygon shape files attribute table. GPS data was projected in GCS North American Datum 1983, on color ortho rectified aerial photographs downloaded from the Bing map image server.

H_2S

cc: File/ UOS



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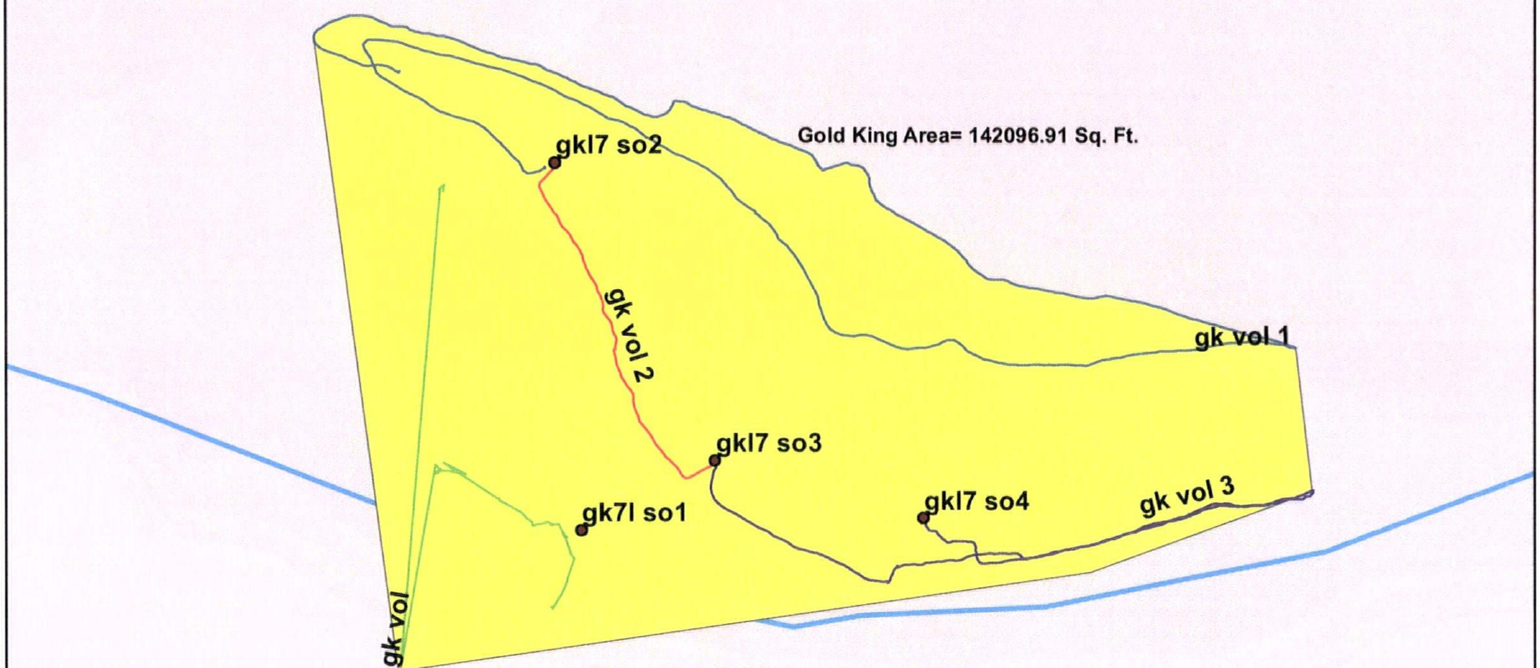

Legend

- Mine Site
- Mine with Sampled Mine Waste
- Sampled Mine with some Remediation
- Mine with Mine Waste
- Domestic/Household Wells
- Rivers and Streams
- Wetlands
- Ground Disturbed By Mining Activities
- Tailings Ponds

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Upper Animas Mining District
San Juan County, Silverton, Colorado
Figure 2: Site Details Map

October 2009

0 50 100 200 Feet

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